

REMARKS/ARGUMENTS

In the specification, an amendment directing entry of the substitute sequence listing filed on January 23, 2004 has been made to perfect sequence compliance. Also in the specification, the first paragraph has been amended to reflect the updated status of non-provisional application 09/573,684.

In the claims, claims 1-33 are pending. Claims 1-9, 14-16, 20-21 and 24-31 have been canceled without prejudice. Claim 33 has been amended to correct a typographical error. Applicant thanks Examiner for pointing out the error. No new matter has been added.

In the Office Action dated March 7, 2006, the Examiner identified the following twenty-three sets of claims and required, under 35 U.S.C. § 121, that the application be restricted to only one of the sets of claims:

- I. Claims 1-9, 14-16, 20-21, 24-25, and 32-33, drawn to the isolated nucleic acid of SEQ ID NO:1, an isolated bacterial strain comprising SEQ ID NO:1, composition or biologically pure culture thereof, and a composition comprising at least one other bacterial strain comprising SEQ ID NO:2, 3, 4, 18, 19, and/or 20, classified in class 435, subclass 252.4.
- II. Claims 1-9, 14-16, 20-21, and 32-33, drawn to the isolated nucleic acid of SEQ ID NO:2, an isolated bacterial strain comprising SEQ ID NO:2, composition or biologically pure culture thereof, and a composition comprising at least one other bacterial strain comprising SEQ ID NO:1, 3, 4, 18, 19, and/or 20, classified in class 435, subclass 252.4.
- III. Claims 1-9, 14-16, 20-21, and 32-33, drawn to the isolated nucleic acid of SEQ ID NO:3, an isolated bacterial strain comprising SEQ ID NO:3, composition or biologically pure culture thereof, and a composition comprising at least one other bacterial strain comprising SEQ ID NO:1, 2, 4, 18, 19, and/or 20, classified in class 435, subclass 252.4.
- IV. Claims 1-9, 14-16, 20-21, and 32-33, drawn to the isolated nucleic acid of SEQ ID NO:4, an isolated bacterial strain comprising SEQ ID NO:4, composition or biologically pure culture thereof, and a composition comprising at least one other bacterial strain comprising SEQ ID NO:1, 2, 3, 18, 19, and/or 20, classified in class 435, subclass 252.4.

- V. Claims 10-13, 17-19, 22-23, and 32-33, drawn to the isolated nucleic acid of SEQ ID NO:18, a composition comprising an isolated bacterial strain comprising SEQ ID NO:18, and a composition comprising at least one other bacterial strain comprising SEQ ID NO:1, 2, 3, 4, 19, and/or 20, classified in class 435, subclass 252.4.
- VI. Claims 10-13, 17-19, 22-23, and 32-33, drawn to the isolated nucleic acid of SEQ ID NO:19, a composition comprising an isolated bacterial strain comprising SEQ ID NO:19, and a composition comprising at least one other bacterial strain comprising SEQ ID NO:1, 2, 3, 4, 18, and/or 20, classified in class 435, subclass 252.4.
- VII. Claims 10-13, 17-19, 22-23, and 32-33, drawn to the isolated nucleic acid of SEQ ID NO:20, a composition comprising an isolated bacterial strain comprising SEQ ID NO:120, and a composition comprising at least one other bacterial strain comprising SEQ ID NO:1, 2, 3, 4, 18, and/or 19, classified in class 435, subclass 252.4.
- VIII. Claims 24-25, drawn to the oligonucleotide probe of SEQ ID NO:5, classified in class 536, subclass 24.32.
- IX. Claims 24-25, drawn to the oligonucleotide probe of SEQ ID NO:8, classified in class 536, subclass 24.32.
- X. Claims 26-27, drawn to the oligonucleotide probe of SEQ ID NO:21, classified in class 536, subclass 24.32.
- XI. Claims 28-29, drawn to the PCR primer of SEQ ID NO:6, classified in class 536, subclass 24.33.
- XII. Claims 28-29, drawn to the PCR primer of SEQ ID NO:7, classified in class 536, subclass 24.33.
- XIII. Claims 28-29, drawn to the PCR primer of SEQ ID NO:9, classified in class 536, subclass 24.33.
- XIV. Claims 28-29, drawn to the PCR primer of SEQ ID NO:10, classified in class 536, subclass 24.33.
- XV. Claims 28-29, drawn to the PCR primer of SEQ ID NO:11, classified in class 536, subclass 24.33.
- XVI. Claims 28-29, drawn to the PCR primer of SEQ ID NO:12, classified in class 536, subclass 24.33.

- XVII. Claims 28-29, drawn to the PCR primer of SEQ ID NO:13, classified in class 536, subclass 24.33.
- XVIII. Claims 28-29, drawn to the PCR primer of SEQ ID NO:14, classified in class 536, subclass 24.33.
- XIX. Claims 28-29, drawn to the PCR primer of SEQ ID NO:15, classified in class 536, subclass 24.33.
- XX. Claims 28-29, drawn to the PCR primer of SEQ ID NO:16, classified in class 536, subclass 24.33.
- XXI. Claims 28-29, drawn to the PCR primer of SEQ ID NO:17, classified in class 536, subclass 24.33.
- XXII. Claims 30-31, drawn to the PCR primer of SEQ ID NO:22, classified in class 536, subclass 24.33.
- XXIII. Claims 28-29, drawn to the PCR primer of SEQ ID NO:23, classified in class 536, subclass 24.33.

In response to the restriction requirement, Applicant hereby provisionally elects, with traverse, to continue prosecution of the claims identified in Group V. However, Applicant respectfully traverses the restriction requirement and respectfully requests reconsideration and withdrawal of the restriction requirement as set forth below.

Applicant submits that a full and complete examination of the claims identified in Group V will also include examination of the claims identified in the other groups. More specifically, Applicant respectfully submits that the claims of Group V should not be examined separately from the claims of Groups VI and VII because the two groups of inventions are directed to similar bacterial strains. Thus, the search and examination of all the claims in an application can be made without serious burden.

Applicant respectfully submits that the subject matter of Groups VI and VII are sufficiently related and are all based on nucleotide sequences of bacterial strains which are capable of ammonia oxidation in freshwater and/or saltwater environments. This significantly narrows the area of art in which the Examiner needs to search. Furthermore, the claims of each group center on essentially similar claim elements, the main difference being the particular nucleotide sequence being used. Each nucleotide sequence is claimed as sharing the common utility of oxidizing ammonia to nitrite and each method yields the same result directed to that

feature. As such, a thorough search and examination of any one claim set would necessarily encompass the search and examination of the remaining claims. In this regard, it is also respectfully noted that, the claims of Groups VI and VII have not acquired a separate status in the art as shown by the fact that the current Office Action indicates that the inventions of each group are "classified in class 435, subclass 252.4." As such, it is respectfully submitted that Groups VI and VII should be searched and examined along together to avoid unnecessary delay and expense to the Applicant and duplicative examination by the Patent Office. Because Groups V-VII are closely related and they form a Markush group with only three members, "the examiner must examine all the members of the Markush group in the claim on the merits, even though they may be directed to independent and distinct inventions." MPEP 803.02. Accordingly, Applicant respectfully requests that Groups VI and VII be prosecuted together in the same application.

Furthermore, pursuant to decision issued in *Examination of Patent Applications Containing Nucleotide Sequences*, 1192 O.G. 68 (November 19, 1996), the Director has decided *sua sponte* to partially waive the requirements of 37 C.F.R. 1.141 *et seq.* and permit "a reasonable number of such nucleotide sequences to be claimed in a single application." MPEP § 803.04. It has been determined that normally ten sequences constitute a reasonable number for examination purposes. MPEP § 803.04 states that "up to ten independent and distinct nucleotide sequences will be examined in a single application without restriction."

///

///

///

///

///

///


Accordingly, it is strenuously urged that the Restriction Requirement be withdrawn. Nevertheless, to the extent it is not, Applicant provisionally elects, with traverse, the claims of Group V (claims 10-13, 17-19, 22-23, and 32-33), and will make appropriate amendments in the next response to office action. The Applicant also reserves the right to later file one or more divisional applications directed to the subject matter of the non-elected/canceled claims.

An action on the merits is respectfully requested.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

Date: 3/15/2006

By: 
Carolyn S. Lu
Registration No. 56,817
Attorney For Applicant(s)

725 South Figueroa Street, Suite 2800
Los Angeles, CA 90017-5406
Telephone: (213) 488-7100
Facsimile: (213) 629-1033